## **MATHEMATICS B.S.**



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## **GENERAL ACADEMIC INFORMATION**

#### **Minimum Graduation Requirements**

- 120 credit hours
- 45 upper-division credit hours (3000-4999 level)
- 2.0 CU cumulative GPA
- Residency: At least 30 credit hours of the degree must be completed while registered in the College of Letters, Arts, and Sciences at UCCS.

#### **Student Responsibilities**

Students are required to know and follow:

- All academic policies set forth by the University, College, and academic department in the UCCS Catalog: <u>catalog.uccs.edu</u>
- All course prerequisites designated by the University. Failure to meet course prerequisites may result in an administrative drop of the course from a student's schedule. See degree audit for course prerequisites within the academic major.

### **DEGREE REQUIREMENTS**

Explore Mathematics: B.S. Program | Department of Mathematics (uccs.edu)

		<b>Major Requireme</b>	nts						
Mathematics Major (BS)	Course/Area	Course Title				Credit Hours			
(46 hours)	MATH 1350	Calculus I				4			
	MATH 1360 Calculus II								
<ul> <li>Requires a minimum of 46</li> </ul>	MATH 2150	Discrete Mathematics							
credit hours of course	MATH 2350 Calculus III								
work for the Statistics,	MATH 3110 Theory of Numbers								
Flexible, and Pure options,	MATH 3130	Introduction to Linear Algebra				3			
and a minimum of 49	MATH 3400	MATH 3400 Introduction to Differential Equations							
hours for the Applied	MATH 3410	Introduction to Analysis				3			
Mathematics option.	MATH 3810	TH 3810 Intro to Probability & Statistics							
All options require a	MATH 4040	Senior Seminar				1			
minimum of 31 credit hours of upper-division	Required Option  All BS Mathematics Majors must select one of the Options below.								
(3000+ level) MATH course	Ap	plied Mathematics Option*	Statistics Option						
work.	MATH 2650	Introduction to Computational Mathematics	3	MATH 4810	Mathematical Statistics I	3			
All MATH courses must	MATH 4310	Modern Analysis I	3	MATH 4820	Mathematical Statistics II	3			
have a grade of "C" or	MATH 4470	Methods of Applied Mathematics	3	MATH 4850	Stochastic Modeling	3			
better.	MATH 4650	Numerical Analysis	3	Math Electives	Complete 6 additional hou MATH 4000+.	ers of 6			
Option Course Recommendations:	Math Electives	Complete 6 additional hours of MATH 4000+.	6						
See the degree audit for	Flexible Option			Pure Mathematics Option					
recommended elective courses	Directed Elective	MATH 4130, 4140, 4310	3	MATH 4140	Modern Algebra I (spring o	only) 3			
based on post-graduate goals.	Choose one								
*NOTE: The Applied Math	Math Electives	Complete 12 additional hours of MATH 4000+.	12	MATH 4310	Modern Analysis I	3			
option requires completion of CS 1120 and PES 1110, 1120, and 1160.				Math Electives	Complete 9 additional hou MATH 4000+.	ers of 9			

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G	eneral Education and Elective Re	equirements					
Core Writing Requirement (6 hours)	<ul> <li>ENGL 1310, 1308, or 1305 (Students choosing ENGL 1305 must complete ENGL 1300 first.)</li> <li>ENGL 1410</li> <li>Writing Portfolio – PORT 3000 (0 credits) or PORT 4000 (1 credit) or alternative – See Degree Audit</li> </ul>						
Reasoning Skills	MATH 1350 (included in major requirements)     MATH 3810 (included in major requirements)						
Core Humanities (3 hours)	HUM 3990     This course also fulfills Navigate and one Writing Intensive course.						
Natural Sciences Lab (1 hour) Oral Communication							
LAS Language other than English Requirement	Complete two semesters of a language other than English equivalent to 1010 & 1020 with high school, transfer, placement exam, or UCCS coursework. Courses taken to fulfill this requirement may also count toward Compass Curriculum Explore - Arts, Humanities and Cultures or general electives. See degree audit for details.						
Compass Curriculum	Component	Course					
(21 hours)	Gateway Program Seminar	GPS 1010					
Explore and Navigate courses must be	Explore – Arts, Humanities and Cultures (2 courses)	See Degree Audit					
taken in departments other than the	Explore – Society, Behavior and Health (2 courses)	See Degree Audit					
major.	Explore – Physical and Natural World (2 courses)	See Degree Audit					
Writing Intensive, Inclusiveness, and	Navigate	HUM 3990 (included in LAS gen ed requirements)					
Sustainability courses may count	Summit	MATH 4040 (included in major requirements)					
toward other requirements within the	Writing Intensive Courses (WIC) (2 courses)	HUM 3990 (included in LAS gen ed requirements)					
· ·	Must include one upper-division (3000+ level)	See Degree Audit					
degree.	Inclusiveness (2 courses)	See Degree Audit					
	Sustainability	See Degree Audit					
NOTE: Applied Mathematics Option	Complete CS 1120 and PES 1110, 1120, and 1160.						
Additional Required Courses	The CS and PES courses will fulfill General Elective hours in the 4-Year Degree Plan below, except for PES						
	1160 which will complete the Natural Science	ce Lab for this Option.					
General Electives (40-43 hours)  Complete additional courses to meet total and upper-division requirements for your degree program.							

## **FOUR-YEAR DEGREE PLAN**

Please note that this is an example degree program and your program may vary. Students are responsible for completing all course prerequisites.

√	FALL	Hours	J	SPRING	Hours
	ENGL 1310	3		ENGL 1410	3
	MATH 1350	4	4 MATH 1360		4
GPS 1010 3 Explore - Physical & Natural World Co		Explore - Physical & Natural World Course	3		
	Explore – Arts, Humanities & Cultures Course	3		Explore – Society, Behavior & Health Course	3
	General Elective			General Elective	3
	TOTAL	16		TOTAL	16
	J	ENGL 1310  MATH 1350  GPS 1010  Explore – Arts, Humanities & Cultures Course  General Elective	ENGL 1310 3  MATH 1350 4  GPS 1010 3  Explore – Arts, Humanities & Cultures Course 3  General Elective 3	ENGL 1310 3  MATH 1350 4  GPS 1010 3  Explore – Arts, Humanities & Cultures Course 3  General Elective 3	ENGL 1310  MATH 1350  GPS 1010  Explore – Arts, Humanities & Cultures Course  General Elective  S Explore - Society, Behavior & Health Course  General Elective

٥	1	FALL	Hours	1	SPRING	Hours
		MATH 2150			MATH 3400	3
ĕ		MATH 2350			MATH 3110	3
Year T		Explore – Arts, Humanities & Cultures Course	3		Explore - Physical & Natural World Course	3
		Explore – Society, Behavior & Health Course	3		Natural Science Lab	1
		General Elective	3		General Elective	4
		TOTAL	16		TOTAL	14

4.	1	FALL	Hours	1	SPRING	Hours
		MATH 3130	3		MATH 3410	
ee		MATH 3810	3		MATH Option Course	
Ē		HUM 3990	3	MATH Option Course <b>or</b> UD MATH Elective*		3
/ear		General Elective	3		General Elective	3
		General Elective (Inclusiveness)	3		General Elective	3
		TOTAL	15		TOTAL	15

	1	FALL	Hours	1	SPRING	Hours
_		MATH 4040	1		MATH Option Course or UD MATH Elective*	3
, T		MATH Option Course or UD MATH Elective*	3		MATH Option Course or General Elective	
Year F		MATH Option Course or UD MATH Elective*	3		Upper Division (UD) General Elective	3
		General Elective	3		UD General Elective	3
		General Elective (Inclusiveness)	3		UD General Elective (Sustainability)	3
		TOTAL	13		TOTAL	15

<sup>\*</sup>Course choice depends on which Option is chosen.